

## PATENT ASSIGNMENT COVER SHEET

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<b>SUBMISSION TYPE:</b>	NEW ASSIGNMENT	
<b>NATURE OF CONVEYANCE:</b>	ASSIGNMENT	
<b>CONVEYING PARTY DATA</b>		
	<b>Name</b>	<b>Execution Date</b>
	BRIDGELUX, INC.	05/16/2013
<b>RECEIVING PARTY DATA</b>		
<b>Name:</b>	TOSHIBA TECHNO CENTER INC.	
<b>Street Address:</b>	1-1, SHIBAURA 1-CHOME, MINATO-KU	
<b>City:</b>	TOKYO	
<b>State/Country:</b>	JAPAN	
<b>Postal Code:</b>	105-8001	
<b>PROPERTY NUMBERS Total: 1</b>		
	<b>Property Type</b>	<b>Number</b>
	Application Number:	12772767
<b>CORRESPONDENCE DATA</b>		
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<b>NAME OF SUBMITTER:</b>	TERESA A. LAVENUE	
<b>SIGNATURE:</b>	/Teresa A. Lavenue/	
<b>DATE SIGNED:</b>	07/28/2014	
<b>Total Attachments: 6</b>		
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### **In the United States Patent and Trademark Office**

**WHEREAS**, Bridgelux, Inc., a corporation, duly organized and existing under the laws of Delaware, with offices at 101 Portola Avenue, Livermore, CA 94551, U.S.A. ("**ASSIGNOR**") owns certain patent applications and/or registrations, as listed in Schedule I attached hereto and incorporated herein by this reference ("**ASSIGNED PATENTS**");

**WHEREAS**, Toshiba Techno Center Inc., a corporation, duly organized and existing under the laws of Japan, with offices at 1-1, Shibaura 1-chome, Minato-ku, Tokyo 105-8001, Japan ("**ASSIGNEE**"), desires to acquire all of the right, title and interest of ASSIGNOR in, to and under the ASSIGNED PATENTS; and

**WHEREAS**, ASSIGNOR and Toshiba Corporation, a corporation, duly organized and existing under the laws of Japan, with offices at 1-1, Shibaura 1-chome, Minato-ku, Tokyo 105-8001, Japan ("**TOSHIBA**") have entered into a certain Asset Purchase Agreement dated April 22, 2013 (the "**APA**"), assigning, among other things, all right, title and interest in and to the ASSIGNED PATENTS from ASSIGNOR to ASSIGNEE.

**NOW, THEREFORE**, in consideration of good and valuable consideration paid by TOSHIBA to ASSIGNOR under the APA, the receipt and sufficiency of which is hereby acknowledged, ASSIGNOR does hereby sell, assign, transfer and convey unto ASSIGNEE its entire right, title and interest in and to the ASSIGNED PATENTS, including all divisions, continuations, continuations-in-part, reexaminations, substitutions, reissues, extensions and renewals of the applications and registrations for the ASSIGNED PATENTS (and the right to apply for any of the foregoing); all rights to causes of action and remedies with respect thereto (including, without limitation, the right to sue for past, present or future infringement, misappropriation or violation of the foregoing), in each case subject to the terms and conditions of the APA and the non-exclusive license granted to ASSIGNOR under that certain License Agreement between ASSIGNOR and TOSHIBA dated May 16, 2013 (the "**LICENSE AGREEMENT**").

This Assignment shall be construed and interpreted in accordance with the APA. Nothing in this Assignment shall, or shall be deemed to, modify or otherwise affect any provisions of the APA or LICENSE AGREEMENT or affect or modify or expand any of the rights or obligations of the parties under the APA or LICENSE AGREEMENT. In the event of any conflict between the provisions hereof and the provisions of the APA or LICENSE AGREEMENT, the provisions of the APA or LICENSE AGREEMENT shall govern and control. Neither ASSIGNOR or ASSIGNEE makes any representations or warranties of any kind, whether express, implied, or otherwise, under this ASSIGNMENT, all of which are governed solely by the APA.

This ASSIGNMENT may not be supplemented, altered or modified in any manner except by a writing signed by all parties hereto. The failure of any party to enforce any terms or provisions of this ASSIGNMENT shall not waive any of its rights under such terms or provisions. This ASSIGNMENT shall bind and inure to the benefit of the respective parties and their assigns, transferees and successors.

This ASSIGNMENT may be executed in counterparts, each of which shall be deemed an original, but all of which together shall constitute one and the same instrument and shall become a binding agreement when one or more of the counterparts have been signed by each of the parties and delivered to the other party.

**[Signature Page Follows]**

IN WITNESS WHEREOF, ASSIGNOR and ASSIGNEE have caused this ASSIGNMENT to be duly executed by authorized officers of ASSIGNOR AND ASSIGNEE on this Sixteenth 16 day of May, 2013.

**ASSIGNOR**

By: 

Name: Bradley J. Bullington

Title: Chief Executive Officer

**ASSIGNEE**

By: \_\_\_\_\_

Name: Yoshiaki Tsuda

Title: President

IN WITNESS WHEREOF, ASSIGNOR and ASSIGNEE have caused this ASSIGNMENT to be duly executed by authorized officers of ASSIGNOR AND ASSIGNEE on this Sixteenth (16) day of May, 2013.

**ASSIGNOR**

By: \_\_\_\_\_

Name: \_\_\_\_\_

Title: \_\_\_\_\_

**ASSIGNEE**

By: Toshi Tsuda

Name: Yoshiaki Tsuda

Title: President

## Schedule I

Application No.	Filing Date	Title
13/190,420	25-Jul-2011	Nucleation of Aluminum Nitride on a Silicon Substrate Using an Ammonia Preflow
13/194,744	29-Jul-2011	A Boron-Containing Buffer Layer for Growing Gallium Nitride on Silicon
13/196,828	27-Jul-2011	N-Type Gallium-Nitride Layer Having Multiple Conductive Intervening Layers
13/197,765	3-Aug-2011	LED on Silicon Substrate Using Zinc-Sulfide as Buffer Layer
13/198,664	4-Aug-2011	Distributed Current Blocking Structures for Light Emitting Diodes
13/196,839	2-Aug-2011	High Temperature Gold-Free Wafer Bonding for Light Emitting Diodes
13/196,854	2-Aug-2011	LED Having a Low Defect N-Type Layer that has Grown on a Silicon Substrate
13/196,870	2-Aug-2011	Non-Reactive Barrier Metal for Eutectic Bonding Process
13/587,746	16-Aug-2012	Distributed Bragg Reflector for Reflecting Light of Multiple Wavelengths from an LED
13/359,428	26-Jan-2012	Gold Micromask for Roughening to Promote Light Extraction in an LED
13/227,406	7-Sep-2011	Buffer Layer for GaN-on-Si LED
13/602,145	1-Sep-2012	An LED that has Bounding Silicon-Doped Regions on Either Side of a Strain Release Layer
13/226,404	6-Sep-2011	GaN LEDs with Improved Area and Method for Making the Same
13/248,821	29-Sep-2011	P-Type Doping Layers for Use with Light Emitting Devices
13/249,157	29-Sep-2011	Light Emitting Devices Having Dislocation Density Maintaining Buffer Layers
13/249,146	29-Sep-2011	Light Emitting Regions for Use with Light Emitting Devices
13/249,184	29-Sep-2011	Light Emitting Devices Having Light Coupling Layers
13/249,196	29-Sep-2011	Light Emitting Devices Having Light Coupling Layers with Recessed Electrodes
13/293,031	9-Nov-2011	Method for Reducing Stress in Epitaxial Growth
12/111,084	28-Apr-2008	Trenched Substrate For Crystal Growth And Wafer Bonding
13/532,749	25-Jun-2012	Thin-Film LED With P And N Contacts Electrically Isolated From The Substrate
61/661,982	20-Jun-2012	Light Emitting Devices Having Shielded Silicon Substrates
11/296,006	6-Dec-2005	Light Emitter With Metal-Oxide Coating
12/607,053	27-Oct-2009	Light Emitter With Coating Layers
12/472,809	27-May-2009	Light-Emitting Device With Improved Electrode Structures
12/434,208	1-May-2009	Method And Apparatus For Manufacturing LED Devices Using Laser Scribing
61/669,955	10-Jul-2012	Submount for LED Device Package
12/626,474	25-Nov-2009	LED With Improved Injection Efficiency
13/292,938	9-Nov-2011	Series Connected Segmented LED
12/058,380	28-Mar-2008	Brazed CVD Shower Head
12/978,842	27-Dec-2010	Cross Flow CVD Reactor
12/892,796	28-Sep-2010	LED Structure To Increase Brightness
13/754,517	30-Jan-2013	GaN Based LED Having Reduced Thickness And Method For Making The Same

12/835,632	13-Jul-2010	Thin-Film LED With P And N Contacts Electrically Isolated From The Substrate
12/941,799	8-Nov-2010	LED-Based Light Source Utilizing Asymmetric Conductors
13/447,574	16-April-2012	Light Emitting Diodes With Smooth Surface for Reflective Electrode

Application No.	Filing Date	Title
PCT/US12/39208	23-May-2012	Laterally Contacted Blue LED with Superlattice Current Spreading Layer
PCT/US12/41779	9-Jun-2012	Nucleation of Aluminum Nitride on a Silicon Substrate Using an Ammonia Preflow
PCT/US12/41726	8-Jun-2012	A Boron-Containing Buffer Layer for Growing Gallium Nitride on Silicon
PCT/US12/39545	25-May-2012	N-Type Gallium-Nitride Layer Having Multiple Conductive Intervening Layers
PCT/US12/41123	6-Jun-2012	LED on Silicon Substrate Using Zinc-Sulfide as Buffer Layer
PCT/US12/41243	7-Jun-2012	Distributed Current Blocking Structures for Light Emitting Diodes
PCT/US12/41656	8-Jun-2012	High Temperature Gold-Free Wafer Bonding for Light Emitting Diodes
PCT/US12/41780	9-Jun-2012	LED Having a Low Defect N-Type Layer that has Grown on a Silicon Substrate
PCT/US12/41783	9-Jun-2012	Non-Reactive Barrier Metal for Eutectic Bonding Process
PCT/US12/52782	29-Aug-2012	Distributed Bragg Reflector for Reflecting Light of Multiple Wavelengths from an LED
PCT/US12/52762	29-Aug-2012	Gold Micromask for Roughening to Promote Light Extraction in an LED
PCT/US12/52821	29-Aug-2012	Buffer Layer for GaN-on-Si LED
PCT/US12/53668	4-Sep-2012	GaN LEDs with Improved Area and Method for Making the Same
PCT/US2012/057661	27-Sep-2012	P-Type Doping Layers for Use with Light Emitting Devices
PCT/US2012/057664	27-Sep-2012	Light Emitting Devices Having Dislocation Density Maintaining Buffer Layers
PCT/US2012/057663	27-Sep-2012	Light Emitting Regions for Use with Light Emitting Devices
PCT/US2012/057666	27-Sep-2012	Light Emitting Devices Having Light Coupling Layers
PCT/US2012/057669	27-Sep-2012	Light Emitting Devices Having Light Coupling Layers with Recessed Electrodes
PCT/US11/51607	20-Sep-2011	LED-Based Light Source Utilizing Asymmetric Conductors
PCT/US12/61173	19-Oct-2012	Series Connected Segmented LED
PCT/US13/30281	11-Mar-2013	Light Emitting Devices Having Shielded Silicon Substrates

Patent No.	Application No.	Filing Date	Title
8,395,165	13/178,497	8-Jul-2011	Laterally Contacted Blue LED with Superlattice Current Spreading Layer
7,439,548	11/502,940	11-Aug-2006	Surface Mountable Chip
7,632,691	12/202,827	2-Sep-2008	Surface Mountable Chip
7,863,626	12/614,430	8-Nov-2009	Surface Mountable Chip
7,622,746	11/378,763	17-Mar-2006	Highly Reflective Mounting Arrangement for LEDs
8,324,652	12/610,261	30-Oct-2009	Highly Reflective Mounting Arrangement for LEDs

7,791,090	11/761,223	11-Jun-2007	GaN Based LED Having Reduced Thickness And Method For Making The Same
8,384,099	12/860,162	20-Aug-2010	GaN Based LED Having Reduced Thickness And Method For Making The Same
8,207,547	12/482,413	10-Jun-2009	Thin-Film LED With P And N Contacts Electrically Isolated From The Substrate
7,943,949	10/936,496	9-Sep-2004	III-Nitride Based Semiconductor Device With Low-Resistance Ohmic Contacts
7,737,455	11/437,974	19-May-2006	Electrode Structures for LEDs With Increased Active Area
8,080,879	12/772,767	3-May-2010	Electrode Structures for LEDs With Increased Active Area
7,674,639	11/504,435	14-Aug-2006	GaN Based LED with Improved Light Extraction Efficiency and Method for Making the Same
7,993,943	12/688,918	18-Jan-2010	GaN Based LED with Improved Light Extraction Efficiency and Method for Making the Same
8,338,848	13/214,725	22-Aug-2011	LED Structure
8,026,527	11/952,048	6-Dec-2007	LED Structure
7,781,780	12/120,051	13-May-2008	Light Emitting Diodes With Smooth Surface for Reflective Electrode
8,163,578	12/834,747	12-Jul-2010	Light Emitting Diodes With Smooth Surface for Reflective Electrode
8,168,984	13/033,533	23-Feb-2011	Light Emitting Diodes With Smooth Surface for Reflective Electrode
7,732,803	12/130,824	30-May-2008	Light Emitting Device Having Stacked Multiple LEDs
7,935,979	12/234,601	19-Sep-2008	Wire Bonding To Connect Electrodes
7,741,134	12/210,845	15-Sep-2008	Inverted LED Structure With Improved Light Extraction
7,915,621	12/779,813	13-May-2010	Inverted LED Structure With Improved Light Extraction
8,183,575	12/359,934	26-Jan-2009	Method And Apparatus For Providing A Patterned Electrically Conductive And Optically Transparent or Semi-Transparent Layer Over A Lighting Semiconductor Device (Formerly: Method And Apparatus For Providing A Patterned ITO Layer Over A Lighting Semiconductor Device)
8,324,636	12/906,349	18-Oct-2010	Method And Apparatus For Manufacturing LED Devices Using Laser Scribing
7,939,839	12/208,502	11-Sep-2008	Series Connected Segmented LED
8,207,543	13/049,492	16-Mar-2011	Series Connected Segmented LED
7,641,939	11/932,293	31-Oct-2007	Chemical Vapor Deposition Reactor Having Multiple Inlets
8,216,375	11/740,736	26-Apr-2007	Slab Cross Flow CVD Reactor
8,216,419	12/165,269	30-Jun-2008	Drilled CVD Shower Head
8,084,775	12/725,424	16-Mar-2010	Light Sources With Serially Connected LED Segments Including Current Blocking Diodes
8,232,568	12/545,358	21-Aug-2009	High Brightness LED Utilizing A Roughened Active Layer And Conformal Cladding
7,968,902	12/060,116	31-Mar-2008	Light Emitting Devices With Constant Forward Voltage
7,825,425	61/049,612 (12/183,020)	1-May-2008	LED Structure To Increase Brightness